

ENVIRONMENTAL BULLETIN OF KERKIRA “IOANNIS KAPODISTRIAS” AIRPORT (CFU)

Reference year 2022

Fraport Regional Airports of Greece A S.A.

Issue Year: 2023

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1. INTRODUCTION

1.1. Location

Kerkira Airport “Ioannis Kapodistrias” is located S-SW of the city of Kerkira and east of Chalikiopoulos lagoon in an area of approximately 760 acres.

1.2. Administration

The Airport administratively belongs to the Regional Unit of Kerkira of the Region of the Ionian Islands in the Municipal Unit of Kerkira of the Municipality of Kerkira.

1.3. Environmental licensing

Approved Environmental Terms	
E.T. Decision Reference number	11945/08.03.2017
E.T. Amendment Decision Reference Number	7208/30.03.2018
E.T. Amendment Decision Reference Number	123235/8107/23.11.2022

1.4. Airport Basic Data

Airport name IATA / ICAO	CFU / LGKR
Airport location – Airport Reference Point (ARP)	Latitude : 39° 36' 07" N Longitude : 19° 54' 42" E
Altitude	2m
Number of runways	1
Operation hours (summer)	0:00-23:59
Operation hours (winter)	07:00 – 22:30

Runways	Length/Width					Code
Runway	2,373 m x 45 m					17/35
Full length of parallel taxiway	N/A					
Number of taxiways	3					
Apron capacity	A	B	C	D	E	
	-	-	8	2	-	

Employees	High season (31.08.2022)	Low season (30.11.2022)
Fraport Greece (FG) employees	47	40
Employees of other companies	1022	508

Terminal	
➤ Total area (m ²)	31.696

Other buildings and service/storage areas	
➤ RFF Station (m ²)	1.606
➤ Guard House (m ²)	77

Parking Areas	
Car parking spaces	350
Bus parking spaces	28
Taxi parking spaces	55

1.5. Airport facilities

1.5.1. Fuel Handlers

Number of fuel handler companies	
Number of fuel handler companies operating at the Airport	2

Installations inside the airport	EKO	GISSCO	HAFCO
Environmental Management System (EMS)	YES	YES	Not operating at the airport

1.5.2. Ground Handlers

Number of ground handler companies	
Number of ground handler companies operating at the Airport	3

Installations inside the airport	SKYSERV	SWISSPORT	GOLDAIR
Environmental Management System (EMS)	YES	YES	YES

2. TRAFFIC DATA STATISTICS

2.1. Annual Traffic Data

Annual Traffic Data for the year 2022	
Overall Annual Air Traffic Movements ¹	29.488
Percent of increase or decrease in relation to the previous year	39,0%
Annual passenger traffic	3.749.106
Percent of increase or decrease in relation to the previous year	83,4%
Annual cargo transferred (tn)	38
Percent of increase or decrease in relation to the previous year	-41,7%

Aircraft types	
Prevailing aircraft types for domestic flights	
Aircraft type	No. of flights
AT76	1.712
A320	852
A32A	363
AT45	362
AT75	206
A20N	157
AT72	150
A321	147
B73H	145
A319	130
Other	772
Prevailing aircraft types for international flights	
Aircraft type	No. of flights
B73H	6.421
A320	4.396
B738	3.387
A32A	2.033
7M8	1.192
A319	880
A321	807
A20N	595
A32B	421
223	344
Other	4.016

¹ Military and training flights not included.

2.2. High season traffic data

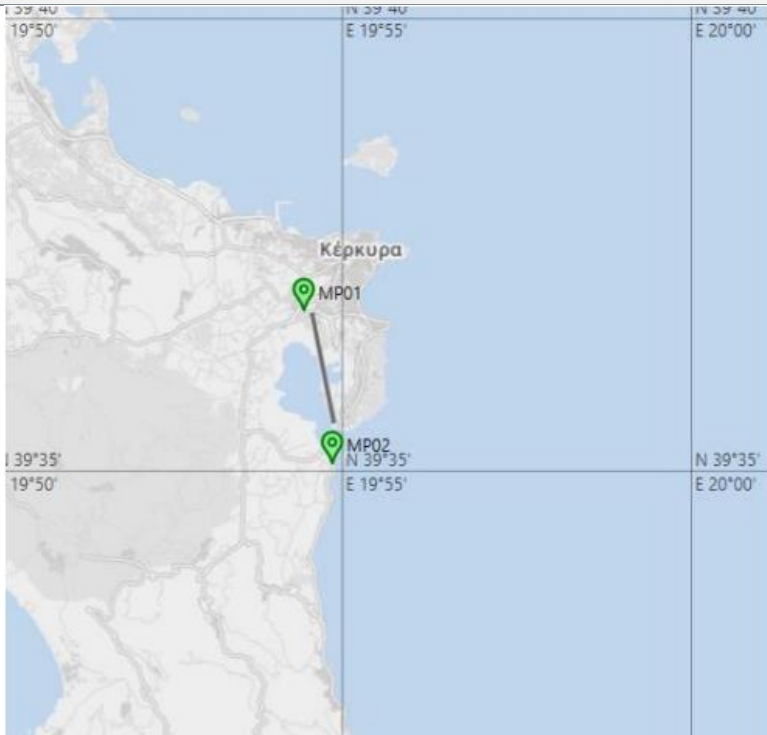
High season traffic data (June-September)	
Highest traffic month	August
Air traffic movements during the month with highest traffic	5.947
Air traffic movements daily average number during the month with highest traffic	191

2.3. Low season traffic data

Low season traffic data (October-May)	
Lowest traffic month	February
Air traffic movements during the month with lowest traffic	324
Air traffic movements daily average number during the month with lowest traffic	10

3. AIRCRAFT NOISE

3.1. Noise measurements during the reference year

Have noise measurements at the airport's surrounding area been performed during the reference year?		YES
Noise Monitoring Stations		
		
Measurement points coordinates	Measurement points description	
MP01: 39° 36' 45.43" N 19° 54' 26.84" E	East of the airport, in KTEO parking lot, in 500 meters distance.	
MP02: 39° 35' 04.03" N 19° 54' 51.22" E	Located in Perama, south of the runway in the garden of a hotel. Affected by departures from runway 17 and arrivals on runway 35.	
Measurement period	01.01.2022 – 31.12.2022	
Noise indicators	L _{den} , L _{night}	

Summary of measurement results:

Noise levels are monitored according to the airport's monitoring program.

MP01: L_{den}=71,2 dB(A) & L_{night}=63,0 dB(A)

MP02: L_{den}=60,7 dB(A) & L_{night}=52,4 dB(A)

Exceedance of the noise indicators levels L_{den} > 70 dB(A) and L_{night} > 60 dB(A) in MP01 was observed.

Aircraft noise exceedances are due to Airport operations, however noise abatement measures and procedures are being considered. This station is located in an area without sensitive receivers – residences. It is proposed to continue the monitoring of aircraft noise in this area, with additional simultaneous measurements in the nearest residential area

3.2. Noise levels calculation based on noise simulation software

Aircraft noise levels calculation based on noise simulation software	NO
Software used: N/A	
Noise indicators and respective contours calculation: N/A	
Noise contours: N/A	

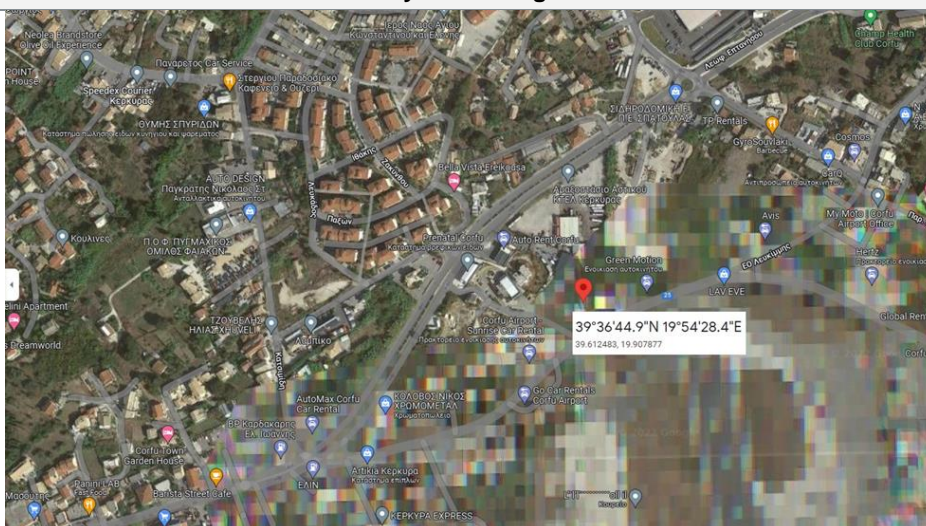
Summary of results:
According Approved Environmental Terms, in 2022 the aircraft noise simulation was not foreseen.

4. AIR QUALITY

4.1. Air quality measurements during the reference year

Have air quality measurements at the airport’s surrounding area been performed during the reference year?	YES
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Air Quality Monitoring Network



Measurement points	Measurement points description
Position: 39° 36' 44.9" N 19° 54' 28.4" E	East of the airport, in KTEO parking lot, in 500 meters distance
Measurement period:	01.03.2021-31.12.2021
Pollutants measured:	PM ₁₀ , PM _{2.5} , NO ₂ , SO ₂ , C ₆ H ₆ , O ₃

Summary of measurement results:

Air quality is monitored according to the airport’s monitoring program.
No exceedances were observed.

4.2. Air pollutants emission and dispersion modelling

Calculation of air pollutants concentrations based on an emission and dispersion modelling software		NO*
Software used: N/A		
Pollutants concentrations and respective contours calculation: N/A		
PM ₁₀		N/A
NO _x		N/A
SO _x		N/A
Benzene (C ₆ H ₆)		N/A

Summary of results:

The air quality simulation is being calculated in 2023.

5. WASTE MANAGEMENT

Waste	Collection	Management/Disposal
Recyclables (paper, plastic, metals, glass)	Separate collection by appropriately licensed private company	Disposal at Kerkira material recovery facility for recycling
Residues (Mixed Waste) and Bulky Waste	Separate collection by appropriately licensed private company	Disposal at Kerkira material recovery facility for materials recovery and disposal to landfill afterwards

Notes:

- Regarding the different categories of the MSW (recyclables, mixed waste, bulky waste), the Airport Users handle their waste together with Fraport Greece A in most cases (central management), while in a few other cases they handled them autonomously. The implementation of a fully central system by Fraport Greece A is expected.
- Regarding the “alternative management” waste categories (Waste lubricant oil WLO, WEEE, etc.):
 - Waste Lubricant Oil (WLO): Collection and management by authorized collector “CYTOP S.A.”
 - Waste Electrical & Electronic Equipment (WEEE): Collection and management by alternative management system “Appliances Recycling S.A.”
 - Accumulators: Collection and management by alternative management system “Re-Battery S.A.”
 - Small batteries: Collection and management by alternative management system “AFIS S.A.”
 - Used tires: Collection and management by alternative management system “ECOELASTIKA S.A.”
- The total quantities of the hazardous waste further to the above-mentioned and produced at the airport, are managed by licensed private companies which have a contract with Fraport Greece A, according to the provisions of the legislation in force.
- The total quantities of the produced waste by category resulting from all activities of the airport, the collectors and final recipients, are recorded by Fraport Greece A and submitted in the Electronic Waste Registry of the Ministry for Environment and Energy via the Annual Waste Producer Report according to the provisions of the legislation in force.

6. ECOSYSTEM AROUND THE AIRPORT

6.1. Flora-Fauna

Flora	
Are there protected zones of vegetation/habitats in the broader airport area?	YES
<p>(if YES) Short description: Kerkira Airport is adjacent to the protected site GR2230005 “PARAKTIA THALASSIA ZONI APO KANONI EOS MESONGI (KERKYRA), (Area: 867.29 ha)” of the Natura 2000 network. The marine region is characterized by a great diversity of flora. The area also includes Chalikiopoulos lagoon (type of priority habitat of the Directive 92/43/EC, 1150* Coastal lagoons)</p>	
Fauna	
Are there protected species of fauna/birds in the broader airport area?	YES
<p>(if YES) Short description: Kerkira Airport “Ioannis Kapodistrias” is near to the Important Bird Area GR083: Lagoons of Kerkyra island (Area: 1,993.74 ha). The protected bird species that have been observed at Kerkira airport since April 2017 are presented below: Eurasian curlew (<i>Numenius arquata</i>), Eurasian spoonbill (<i>Platalea leucorodia</i>), Eurasian stone-curlew (<i>Burhinus oedicephalus</i>), Garganey (<i>Anas querquedula</i>), Glossy ibis (<i>Plegadis falcinellus</i>), Great egret (<i>Casmerodius albus</i>), Lapwing (<i>Vanellus vanellus</i>), Lesser kestrel (<i>Falco naumanni</i>), Marsh harrier (<i>Circus aeruginosus</i>), Mediterranean gull (<i>Larus melanocephalus</i>), Pallid harrier (<i>Circus macrourus</i>), Red-footed falcon (<i>Falco vespertinus</i>), Sandwich tern (<i>Sterna sandvicensis</i>), Shelduck (<i>Tadorna tadorna</i>), Purple heron (<i>Ardea purpurea</i>), Squacco heron (<i>Ardeola ralloides</i>)</p>	

7. WILDLIFE HAZARD MANAGEMENT

Wildlife strikes and wildlife hazard management measures	
Wildlife species that suffered a strike	Strikes (%)
Pheasants	24%
Small passerines	23%
Pigeons or Corvids	19%
Ducks, Herons, Waders	19%
Birds of prey, Owls	10%
Gulls	5%
Wildlife strike risk mitigation measures	
<p>The presence and behavior of wildlife species at Kerkira airport is monitored in regular intervals, daily, from dawn to dusk. Some of the wildlife control methods applied at Kerkira airport are: distress calls (bioacoustics), digital sounds, anti-bird laser, pyrotechnics, etc. Preventive long-term actions that are mainly related to habitat management measures (e.g. grass cutting, water body management) are also taken to further reduce the presence of species constituting a risk to flight safety. In addition, a NOTAM is published and regularly updated.</p>	

8. CULTURAL HERITAGE

Have new cultural heritage properties been discovered during the reporting period?	NO
<i>(if YES)</i> Details provided in the table below:	

Location	Date of discovery	Type of discovery	Additional protection measures taken

9. RESOURCES CONSUMPTION

9.1. Energy consumption

Energy consumption (monthly electric energy consumption, in Kwh)	
Total annual electric energy consumption (in Kwh)	5.809.815

9.2. Fuel consumption

Fuel consumption		
Number of FG vehicles at the airport	17	
Total annual fuel consumption	Diesel (lt)	25.666,18
	Unleaded gasoline (lt)	1.058,48

9.3. Heating oil or natural gas consumption

Heating oil or natural gas consumption	
Total annual heating oil consumption (lt)	-*
Total annual heating natural gas consumption (m ³)	N/A

*Heating and air conditioning is performed via heat pumps

9.4. Fuel consumption for generator

Fuel consumption	
Total annual consumption (lt)	4.013,01

9.5. Water consumption

Water consumption	
Total annual consumption (m ³)	6.133,03

10. GREENHOUSE GAS EMISSIONS & CARBON FOOTPRINT

Greenhouse gas emissions that were included in the carbon footprint calculation are the CO₂ emissions included in scope 1 & 2 of the GHG protocol:

- Scope 1: Direct GHG emissions that occur from sources that are owned and/or controlled by the airport,
- Scope 2: Indirect GHG emissions from the generation of purchased electricity, steam, heat or cooling consumed by the airport.

Source Flows	Total CO ₂ Emissions (t)
	2022
Direct emissions form heating fuel (scope 1)	0,0
Direct emissions from fuel used for fleet vehicles (scope 1)	71,05
Direct emissions from fuel used for generators (scope 1)	10,71
Direct emissions from refrigerants scope 1)	-
Indirect emissions from electricity consumption (scope 2)	2.440,20
Total (t)	2.522,0
Kg CO₂ /passenger	0,67

Notes:

Fraport Greece A is committed to the monitoring, management and reduction of its airports carbon footprint. In order for this target to be achieved:

- Direct and indirect carbon emissions from all the emission sources in the airports' boundaries are calculated and reported, based on the GHG Protocol (scope 1 & 2)
- Airport is certified according to ACA (Airport Carbon Accreditation), Level-1

11. ELECTROMAGNETIC RADIATION

The measurements were carried out at 6 different points around the antenna array located at the airport on 14/12/2022 (measurement start time 14:30, measurement end time 18:00).

1) Zone 27 MHz – 3 GHz

Measurement point	Amperage E	Power Density
	(V/m)	(W/m ²)
1	0.4616027	0.0005652
2	1.1832437	0.0037138
3	0.2340589	0.0001453
4	5.1462043	0.0702494
5	0.4463664	0.0005285
6	0.1041379	0.0000288

2) Zone 420 MHz – 6 GHz

Measurement point	Amperage E	Power Density
	(V/m)	(W/m ²)
1	0.4994840	0.0006618
2	1.4089058	0.0052654
3	0.2661767	0.0001879
4	5.9440392	0.0937200
5	0.5599153	0.0008316
6	0.2058840	0.0001124

Notes:

At this measurement campaign, no exceedances were found. The defined limits of exposure to electromagnetic radiation, are respected, as they are determined by the relevant legislation.

12. HUMAN COMSUMPTION WATER MONITORING PROGRAM

Human consumption water quality	
Water supply (public water network or airport's boreholes)	Municipal Water & Sewage Company of Kerkira
Is sampling of the airport's water network performed?	YES
<i>(if YES)</i> Sampling frequency:	Quarterly
<p>Summary of results: The results of the chemical analyses show that the water provided by the Municipal Water & Sewage Company of Kerkira is non potable due to high concentration of sulphates. The rest of the results of the microbiological and chemical analyses show that the parameters analyzed as regards the airport's water network are within the legislative limits defined by the Ministerial Decision Γ1 (δ)/ΓΠ οικ. 67322/ ΦΕΚ 3282 Β/19-9-2017 regarding the quality of human consumption water.</p>	

13. RAINWATER

RAINWATER (collection, treatment disposal and recipient)		
Area	Collection/treatment/disposal	[YES/NO]
Apron and manoeuvring area	Collected in drainage ditches leading to the sea	YES
Other runoffs (runway etc.)	Collected in drainage ditches leading to the sea	YES
Treatment of rainwater by oil-separator		YES

Rainwater quality	
Is sampling of the airport's rainwater performed?	YES
(if YES) Sampling frequency:	Annual
Parameters analyzed: pH, conductivity, TSS, DO, NO ₃ , NO ₂ , Oil & grease, BOD, COD, Total Petroleum Hydrocarbons (TPH), PAHs, BTEX, Heavy metals, PCBs, Detergents	
Summary of results:	
Surface rainwater quality is monitored according to the airport's monitoring program. Due to the absence of designated recipients and relevant national quality limits for surface rainwater, the Environmental Health & Safety Guidelines of the International Finance Corporation (IFC) are adopted. Surface rainwater monitoring for 2022, was not performed.	

14. GROUNDWATER AND/OR SOIL AND/OR SOIL GAS MONITORING

Groundwater and/or soil and/or soil gas quality	
Is sampling of the airport's groundwater and/or soil and/or soil gas performed?	YES*
(if YES) Sampling frequency:	Annual
Parameters analyzed: TPH, BTEX, MTBE, PAH	
Summary of results:	
Groundwater quality is monitored according to the airport's monitoring program from boreholes managed by Fraport Greece. Groundwater monitoring for 2022 was not performed. According to the approved environmental terms, monitoring of groundwater and air from the Fuel Handlers is not foreseen for the year 2022.	

15. SEWAGE TREATMENT AND DISPOSAL

Sewage	
Sewage network to the municipal waste water treatment plant (WWTP)	YES
Autonomous airport’s waste water treatment plant (WWTP)	NO

Blue water
Collection and disposal: Collection in watertight tank and disposal to the municipal sewage network.

Waste water treatment plant description (where applicable) <i>Description of characteristics and condition of the airport’s WWTP including possible problems. Type and frequency of the effluent quality measurements.</i>	
Degree of treatment of airport’s WWTP	N/A
Treatment method	N/A
Disposal of treated wastewater	N/A
Sludge disposal	N/A
Sampling frequency of WWTP effluent	N/A
Parameters analyzed	N/A
Summary of quality of WWTP effluent	N/A